

AUSTRALIAN NEUROPTERA. VI.*

(By P. Esben-Petersen, Silkeborg.)

Amongst a lot of very interesting material of Australian Neuroptera, collected by Mr. L. Franzen, Brisbane, I have found some new and undescribed genera and species. It has given me very much pleasure to work out the material, and I express here my most sincere thanks to Mr. L. Franzen for the opportunity to examine these interesting Neuropterous insects.

The following genera and species are described:—

Franzenia irrorata, n.g. and n.sp.—Myrmeleontidae.

Zachobiella submarginata, n.sp.—Hemerobiidae.

Neurorthus brunneipennis, n.sp.—Sisyridae.

Theristriella stigma, n.g. and n.sp.—Mantispidae.

***Franzenia* n.g.**

Antennae rather long, stout and strongly clubbed. Prothorax longer than broad. Legs of moderate length; femora, tibia and tarsus of fore and intermediate legs of equal length; tibiae of intermediate legs strongly and conspicuously broadened. No spurs. Fore and hindwings nearly equal as to length and shape. In the forewing R arises close to the base of the wing and a little before the fork of Cu1. Basal free part of Cu2 rather long; Cu2 somewhat sinuate, and its apical tip curved upward and connected to Culp. 2A and 3A running free of each other, but connected to each other by two cross veins. No Banksian line present, and no cross veins in the apical areas of the wings. In the hindwing one cross vein before origin of R.

Genotype: *Franzenia irrorata*.

This new genus has to be placed in the Dendroleonini. The best and most peculiar generic character is the broadened tibia of the intermediate legs.

I take the liberty to name the interesting genus in honour of Mr. L. Franzen, who has done so much in exploring the Neuropterous fauna of Australia.

*Nos. 1—4 have appeared in the "Proceedings of the Linnean Society of N.S. Wales"; No. 5 in "Queensland Naturalist," vol. vi., pp. 11 and 12.

Franzenia irrorata, n.sp. (Plate III., fig. 1.)

Face and palpi yellow; apical joint of labial palpi with a brown spot exteriorly. A blackish brown transverse band below the antennae. Vertex blackish with a narrow greyish white transverse band a little above the antennae. Antennae blackish with narrow pale joinings; basal joint stout and yellowish; second joint yellowish below, brown above. Prothorax narrowing toward front margin, brownish black with a rather broad pale longitudinal median band, which is almost disappearing toward the hind margin; at each side of the median band a longitudinal streak, reaching from the transverse furrow to the hind margin. Meso and metathorax brownish black with a few indistinct pale spots; mesothorax with strong black bristles on its front part. Abdomen blackish and



Franzenia irrorata.

Tibia and tarsus of intermediate legs.

with pale pleurae; each segment with a narrow yellowish hind margin, and with a small yellow median spot at front margin; this spot is divided by a fine black streak. Legs whitish with black bands, spots and streaks, and with long black and white bristles.

Venations of wings whitish with numerous short or longer black streaks. Forewings with many brownish black spots; in the subcostal area five or six dark streaks, placed in front of five or six dark streaks on R. All the veins with long white or black hairs. The male with a "pelote" at base of hind wing.

Forewing 18mm, hindwing 17mm, body 17mm. Two specimens at Brisbane, 2/1/1927 (L. Franzen leg.).

The type specimen in the collection of Mr. L. Franzen, the other in the collection of the author.

***Zachobiella submarginata* n.sp.** (Plate III., fig. 4.)

Head yellowish-white; below each eye and along the lateral margin of clypeus a shining brownish-black streak. Palpi blackish, antennae yellowish-white. Prothorax twice as broad as long, above whitish, and with broad, blackish-brown lateral margins. Meso and metathorax whitish, with a brownish spot above base of each wing. Abdomen pale (body somewhat discoloured). Legs whitish; intermediate and hind tibiae spindle-shaped. Head, thorax and legs with long pale hairs. Membrane of wings hyaline; that of forewings with a faint pale yellowish tinge, and with a row of small streak-shaped pale greyish inconspicuous clouds between the forks along hind margin. The longitudinal veins of forewings yellowish, but all the forks and cross veins, except those of costal area, blackish. Venation of hindwing whitish with the exception of the single discal cross vein and a few forks in apical area, which are blackish. The posterior margin of hindwing is dark for a very short distance near its middle. Pterostigma of both pairs of wings hardly visible. Jugal lobe of forewing very conspicuous.

Forewing 5.5 mm, hindwing 5 mm.

One female (type specimen), Tambourine Mt., 5/2/1928 (L. Franzen leg.), one female (type), and one male are kept in the collection of L. Franzen; one male in the collection of the author.

Zachobiella submarginata is the first known species from Australia of that genus. In 1920 N. Banks founded the genus (Bull. Mus. Comp. Zool. Cambr. 335) for the species *punctata* Banks (ibid. 335, pl: III., fig. 36, 1920) from the Philippines. Later on the author described *jacobsoni* (Entom. Mitt. 406, fig. 4, 1926) from Sumatra, and L. Navas described *marmorata* (Mem. Pont. Accad. Sc. Nuovi Lincei, vol. IX., Roma, 118, fig. 6, 1926) from the same island. *Zachobiella submarginata* is nearest allied to *Zachobiella punctata* Bks.

***Neurorthus brunneipennis* n.sp.** (Plate III., fig. 3).

Head and thorax reddish yellow. Antennae and palpi yellowish. Abdomen brown above, yellow below; fourth, fifth, and sixth segment with pale yellowish spots or

streaks laterally. Legs yellowish white. Antennae, head, thorax, abdomen and legs strongly haired. Membrane of wings hyaline; that of forewings yellowish tinged; but the apical margin narrowly brownish shaded. Venation of wings brownish yellow; all the cross veins brown; those of the disc of forewings dark brown and narrowly shaded.

Forewing 8 mm, hindwing 7 mm.

Eight specimens, Tamborine Mt., 5/11/1928 (L. Franzen leg.).

Type specimen in the collection of Mr. L. Franzen; other specimens in the author's collection.

Of the genus *Neurorthus* Costa (Nuovi stud. Ent. Calabr. Ult. 32, 1863) two European and two Japanese species are known. The Japanese species, *punctatus* Nak. and *fuscinervis* Nak., differ from the European, *fallax* Ramb. and *iridipennis* Costa, by the presence of some forked cross veins in the costal area of the forewings. In that respect the Australian species is nearest allied to the Japanese.

***Theristriella* n.g.**

Fore tarsus with two claws. Prothorax closed below. M forks almost just below origin of Rs. its stem rather long and straight as in *Theristria*. In the forewing M 1 and 2, is connected to R5 by a short cross vein; in the hindwing this crossvein touches the stem of M. Cu forks regularly as in *Theristria*. In the forewing 1A and 3A is unforked; 2A forked. Costal area of forewing rather broad. The pterostigma very short but very broad, opaque. When the wing is held against the light trace of one or two cross veins are visible in the pterostigmatical area. Few branches from R5.

Genotype: *Theristriella stigma* n.sp.

This new genus is allied to *Theristria* Gerst. and *Calomantispa* Banks, and the three genera may be separated in the following way:—

1. Wings long and rather slender. In the forewing the stem of M is straight and does not coalesce with R5. 1A in the forewing unforked. Forewings without coloured markings. 2.

Wings short and broad. In the forewings the stem of M is curved, and it coalesces for a distance with the basal part of Rs. 1A in the forewing forked. Forewings with coloured markings. *Calomantispa*.

2. Pterostigma of moderate width, but several times longer than broad, and with inconspicuous cross veins. Many branches from Rs. *Theristria*.

Pterostigma very broad, hardly twice as long as broad. Few branches from R5. *Theristriella* n.g.

In "Broteria," pag. 27, 1927, Navas has described an Australian genus *Veura*, which is a synonym of *Theristria* Gerst. In "Proc. Linn. Soc. N.S. Wales," 594, 1923, I gave a notice of, that *Theristria felina* Gerst. was the same as *Theristria delicatula* Westw. All the generic characters given by Navas for *Veura* agree exactly with those of *Theristria*. But it is, unfortunately, what Navas does, to use the numbers of branches from Rs as a generic or specific character, because the numbers of those veins are liable to vary in a high degree. In my collection I possess five specimens of *Th. delicatula*, and the numbers of branches from 1st, 2nd and 3rd radial cell are respectively: 1st specimen, right forewing 1, 3, 4; right hindwing 1, 3, 4; left forewing 1, 3, 4; left hindwing 1, 3, 4. Second specimen (the branches counted in the same order): 1, 3, 2; 1, 3, 2; 1, 2, 2; 1, 2, 3. Third specimen: 1, 2, 3; 1, 3, 3; 1, 3, 2; 1, 2, 3. Fourth specimen: 1, 3, 4; 2, 2, 4; 1, 3, 3; 1, 3, 3. Fifth specimen: 1, 2, 3; 1, 3, 3; 1, 2, 4; 1, 3, 4. I suppose that *Veura debetazi* Navas (Broteria, pag. 28, fig. 31, 1927) is a specimen of *Th. delicatula* Westw. with somewhat differing markings of the head.

***Theristriella stigma* n.sp.** (Plate III., fig. 2.)

Face yellowish; the central part of labrum and clypeus occupied by an indistinct pale brown spot. From the brown vertex downward three narrow blackish streaks. Vertex with two yellowish brown spots. Antennae slender; the two basal joints brownish yellow; the second joint with a darker ring; the rest of antennae black. Prothorax about three times as long as broad in front; dark brown with a pale indistinct median streak; granulated and with short dark hairs; finely transversely sulcated in its apical part; prothorax tubercles indistinct. Hind margin of prothorax blackish. Meso and metathorax blackish with an irregular pale median streak. Abdomen discoloured. Legs greyish white; femorae mostly brown. Venation of wings dark brown; pterostigma reddish brown; basal part of wings yellowish tinged.

Forewing 10 mm, hindwing 9 mm.

One female specimen, Southport, 50 miles from Brisbane, 2/10/1927 (L. Franzen leg.)

The type specimen in the collection of Mr. L. Franzen.



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